

WHAT IS CLAIMED IS:

Sub a1  
5  
10  
1. A reflection type liquid crystal display, comprising: a pair of substrates disposed opposite to each other via a liquid crystal; a plurality of switching elements formed on one surface of said pair of substrates; a reflective layer constituted of the same material as a material constituting said switching element and simultaneously formed during formation of said switching elements; and a transparent pixel electrode formed on said reflective layer via an insulation layer and connected to one electrode constituting said switching element.

15  
20  
2. The reflection type liquid crystal display according to claim 1, wherein said switching element is a thin film transistor, and said reflective layer is formed of the same material as a material of a gate electrode of said thin film transistor and constituted on the same plane as a plane of said gate electrode.

C2  
25  
3. The reflection type liquid crystal display according to claim 1, wherein said switching element is a thin film transistor, and said reflective layer is formed of the same material as a material of a source/drain electrode of said thin film transistor and formed on the same plane as a plane of said source/drain electrode.

4. The reflection type liquid crystal display according to claim 1, wherein a color <sup>30</sup>filter layer is disposed between said reflective layer and said transparent pixel electrode.

5

*Sub 12* → 5. The reflection type liquid crystal display according to claim 1, wherein a shielding layer is disposed on an area of said switching elements.

10

6. The reflection type liquid crystal display according to claim 2, wherein said [thin film transistor comprises a] gate electrode electrically connected to a scanning line, a gate insulation film formed to cover said gate electrode, a semiconductor layer formed on said gate insulation film, a drain electrode electrically connected to a signal line, and a source electrode electrically connected to said transparent <sup>31</sup>pixel electrode, and said reflective layer is electrically separated from said gate electrode.

15

20

7. The reflection type liquid crystal display according to claim 3, wherein said thin film transistor comprises a gate electrode electrically connected to a scanning line, a gate insulation film formed to cover said gate electrode, a semiconductor layer formed on said gate insulation film, a drain electrode electrically connected to a signal line, and a source electrode electrically

25

connected to said transparent pixel electrode, and said reflective layer is formed on said gate insulation film, constituted of the same material as a material constituting said drain electrode, simultaneously formed during formation of said drain electrode and electrically connected to said drain electrode.

8. The reflection type liquid crystal display according to claim 1, wherein said reflective layer is formed of aluminum or aluminum alloy.

9. The reflection type liquid crystal display according to claim 8, wherein said aluminum alloy is an alloy of aluminum and neodymium.

10. The reflection type liquid crystal display according to claim 8, wherein a diffusion preventive layer is disposed below said reflective layer to prevent said aluminum from being diffused to a lower layer.

11. The reflection type liquid crystal display according to claim 10, wherein said diffusion preventive layer is formed of titanium.

12. The reflection type liquid crystal display according to claim 1, wherein a rough portion is formed in the lower layer of said reflective layer, and said

reflective layer is formed to cover said rough portion.

13. The reflection type liquid crystal display according to claim 12, wherein said rough portion is formed of a material which is not deformed in a heating process performed later and which does not contain high density impurities adversely affecting the liquid crystal display.

14. The reflection type liquid crystal display according to claim 12, wherein said rough portion is formed by forming an insulation film and patterning the insulation film.

15. The reflection type liquid crystal display according to claim 12, wherein said rough portion is formed by cutting the surface of the lower layer of said reflective layer.

16. A method of manufacturing a reflection type liquid crystal display, comprising the steps of: forming a plurality of switching elements on one surface of a liquid crystal display panel substrate, forming a reflective layer with the same material as a material constituting said switching element during the step of forming said plurality of switching elements; forming an insulation layer on said reflective layer; and forming a transparent pixel electrode on said insulation layer so as to be electrically connected

to an electrode constituting said switching element.

17. The method of manufacturing the reflection type liquid crystal display according to claim 16, wherein said switching element is a thin film transistor, and said reflective layer is formed of the same material as a material of said gate electrode and formed on the same plane as a plane of said gate electrode in the step of forming the gate electrode of said thin film transistor.

18. The method of manufacturing the reflection type liquid crystal display according to claim 16, wherein said switching element is a thin film transistor, and said reflective layer is formed of the same material as a material of a source/drain electrode and formed on the same plane as a plane on which said source/drain electrode is formed in the step of forming the source/drain electrode of said thin film transistor.

19. The method of manufacturing the reflection type liquid crystal display according to claim 17, comprising the step of forming a rough portion on said substrate before the step of forming said reflective layer, so that said reflective layer is formed to cover said rough portion.

20. The method of manufacturing the reflection

type liquid crystal display according to claim 18,  
comprising the step of forming a rough portion on said gate  
insulation film before the step of forming said reflective  
layer, so that said reflective layer is formed to cover  
5 said rough portion.

21. The method of manufacturing the reflection  
type liquid crystal display according to claim 16,  
comprising the step of forming a color filter layer on said  
10 insulation layer before the step of forming said  
transparent pixel electrode, so that a second insulation  
layer is formed on said color filter layer to form said  
transparent pixel electrode.

22. The method of manufacturing the reflection  
type liquid crystal display according to claim 16,  
comprising the step of forming a shielding film on said  
15 switching elements before the step of forming said  
transparent pixel electrode.

23. The method of manufacturing the reflection  
type liquid crystal display according to claim 17,  
comprising the steps of: preparing a first mask for  
20 photolithography having a pattern to simultaneously form  
said gate electrode and the reflective layer on said  
substrate and a second mask for photolithography having a  
pattern to form only said gate electrode on said substrate;

and using either one of said first and second masks to form both said gate electrode and said reflective layer, or only said gate electrode on said substrate.

5           24. The method of manufacturing the reflection  
type liquid crystal display according to claim 18,  
comprising the steps of: preparing a first mask for  
10 photolithography having a pattern to form said source/drain  
electrode and said reflective layer on said gate insulation  
film and a second mask for photolithography having a  
pattern to form only said source/drain electrode on said  
gate insulation film; and using either one of said first  
and second masks to form both said source/drain electrode  
and said reflective layer, or said source/drain electrode  
15 on said gate insulation film.

add a<sup>4</sup>